

Winter

2015



BAD RIVER NATURAL RESOURCE

Common Ground

Beach Monitoring – Recap of 2014 and Plans for 2015

By: Naomi Tillison, Water Resources Specialist, wqs@badriver-nsn.gov



With spring right around the corner, we are gearing up for the field season. On an annual basis, we review our monitoring design for Lake Superior coastal waters within the Bad River Reservation and solicit input from the community to help refine our beach monitoring and notification plans.

History of the Beach Monitoring Project

Bad River Natural Resources Department (BRNRD) initiated beach monitoring in the summer of 2011 utilizing Great Lakes Restoration Initiative funds obtained through the Chequamegon Bay Area Partnership. Upon the finalization of the Bad River Tribe's water quality standards (WQS) developed under Clean Water Act program authority, the Tribe became eligible for funding under the Beach Environmental Assessment and Coastal Health (BEACH) Act. We have been utilizing BEACH Act funding to monitor water quality at beaches since 2013. More information about the BEACH Act and the health of coastal waters can be found on EPA's website at: <http://water.epa.gov/type/oceb/beaches/>.

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PUBLIC NOTICE

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Lake Superior Chippewa
Comment Period and
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Figure 1: Nick Blanchard monitoring the conditions of Amnicon Bay beach, which is located within the Bad River Reservation on Madeline Island.

2014 Beach Monitoring Results

BRNRD collected 181 water samples from twelve beaches within the Bad River Reservation this past summer – that's three more sites than in 2013. Waverly beach was monitored most frequently, typically sampled twice per week. Beaches at Joe Rose's, Madigan, and the mouth of the Bad River were usually visited once per week.

The water samples collected from these beaches were analyzed for *E. coli*, an indicator of fecal contamination. We compared the samples results to the Tribe's WQS. If the *E. coli* concentration in a sample was greater than or equal to 235 CFU/100 mL (or comparable units), then BRNRD would issue a swimming advisory for the specific beach where the sample was collected. The swimming advisory would be lifted when a sample collected from that specific beach had an *E. coli* concentration less than the 235 CFU/100 mL.

We implemented multiple approaches to notify the community when a swimming advisory was issued due to elevated *E. coli* levels. We posted an advisory sign at the affected beach and distributed copies of the advisory sign to various locations throughout the community and via email. We also updated the

recorded message you hear when calling the beach phone line (715-685-7870) anytime an advisory was issued or lifted.

BRNRD posted eight swimming advisories in 2014 at beaches within the Reservation – one less advisory as compared to 2013 (and more samples were collected in 2014). Five out of the twelve beaches sampled had a minimum of one advisory issued. The eight advisories occurred on five different days. Figure 2 displays the number of samples that exceeded the Tribe's *E. coli* criterion at each beach monitored. Only 4% of the samples collected from Reservation beaches in 2014 had elevated *E. coli* concentrations.

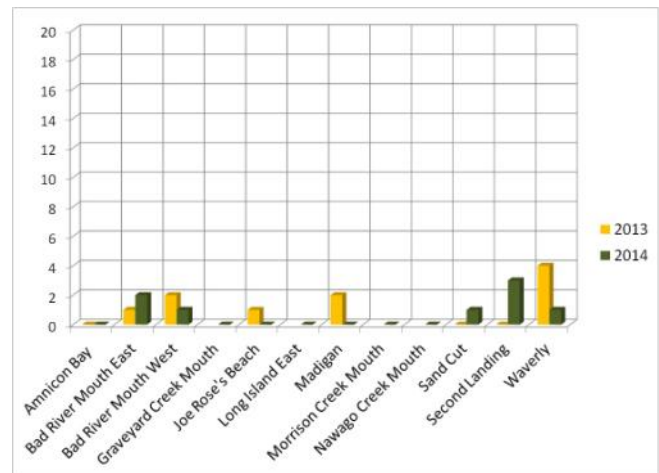


Figure 2: The number of samples per beach that exceeded the *E. coli* criterion during the 2013 and 2014 swimming seasons. BRNRD posted an advisory sign when a sample had elevated *E. coli* levels.

E. coli exceedances are often associated with runoff events. For example, over 3 inches of rain was received starting late on 8/24/14. As a result, the flow in the Bad River recorded at the Elmhoist Road crossing increased (Figure 3). The *E. coli* concentrations measured on August 26th in the White and Bad Rivers and at the beach east of the Bad River mouth exceeded the Tribe's WQS whereas the *E. coli* concentration at the beach west of the Bad River mouth was well below the threshold (Figures 4 and 5).

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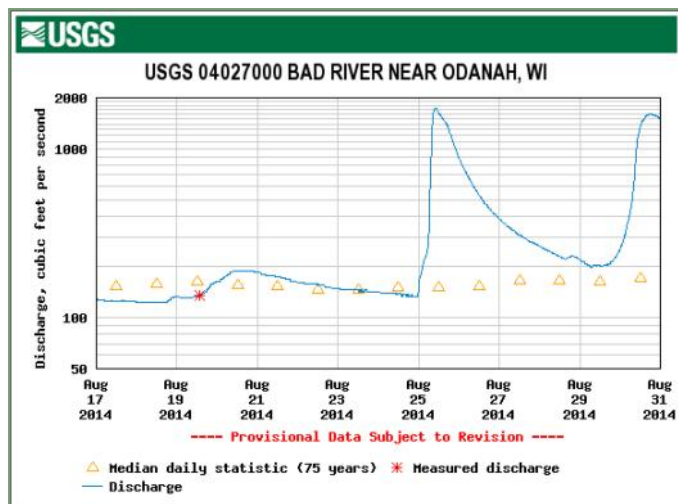


Figure 3: Discharge measured in the Bad River at the Elmhoist Road crossing (around 25 river miles upstream of the mouth) increased starting August 25, 2014, due to a rain event. Figure created from USGS website accessed on 3/5/2015: http://nwis.waterdata.usgs.gov/wi/nwis/uv?site_no=04027000

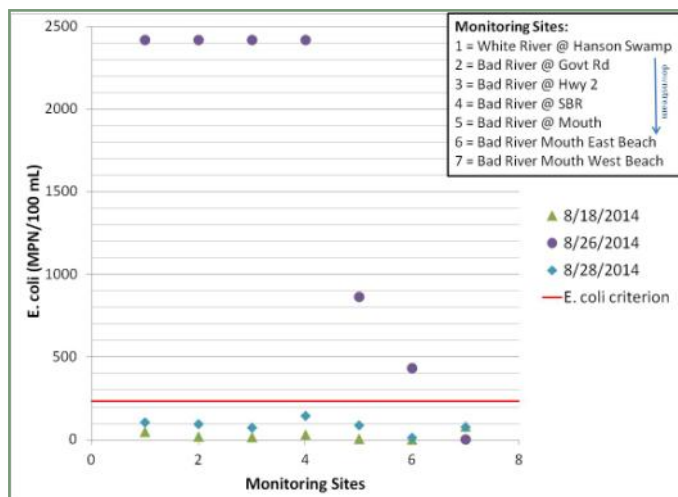


Figure 4: *E. coli* concentrations measured in mid to late August at monitoring sites located on the White River, Bad River, and Lake Superior beaches. An advisory was issued for the beach east of the Bad River mouth as a result of the elevated *E. coli* concentrations on 8/26/14.



Figure 5: The sediment plume from an August storm event affected the beaches to the west (photo on top) and east (photo on bottom) of the Bad River mouth differently. BRNRD issued an advisory for the east beach due to the elevated *E. coli* concentration in the water sample collected on 8/26/14.



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Beach Monitoring – Recap of 2014 and Plans for 2015 *Continued*

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The presence of *E. coli* in streams suggests that pathogenic microorganisms might also be present and that swimming might be a health risk (U.S. EPA 2012). Sources of fecal contamination to surface waters include wastewater treatment plants, on-site septic systems, domestic and wild animal manure, and storm runoff (U.S. EPA 2012).

Table 1: Proposed Beach Monitoring Plan

Monitoring Location	Tier	Monitoring Frequency
Bad River Mouth East	1	1x per week
Bad River Mouth West	1	1x per week
Second Landing	1	1 x per week
Waverly	1	2x per week
Amnicon Bay (Madeline Island)	2	1x per 2 weeks
Bell Creek Mouth	3	1x per season (more if requested)
Graveyard Creek Mouth	3	1x per season (more if requested)
Honest John	3	1x per season (more if requested)
Long Island East	3	1x per season (more if requested)
Sand Cut	2	1x per 3 weeks
Joe Rose Beach	1	1x per week
Madigan	2	1x per 2 weeks
Morrison Creek Mouth	3	1x per season (more if requested)
Nawago Creek Mouth	3	1x per season (more if requested)
Other Sites	3	1x per season (if requested)

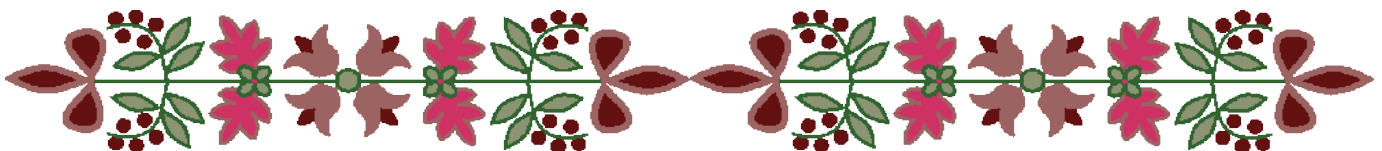
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Beach Monitoring Plans for 2015

BRNRD received BEACH Act funds from the EPA to continue monitoring the health of beaches within the Reservation. Monitoring frequencies will vary by beach, based on beach use and potential risk to human health presented by pathogens. The beaches within the Reservation were classified into three tiers, with monitoring to occur most frequently at Tier 1 beaches (Table 1). BRNRD will be soliciting input from the community on the beach monitoring plan that is proposed for the 2015 swimming season.

We would also like your input on the methods we should implement to notify you when *E. coli* exceedances are measured and swimming advisories are issued. BRNRD is proposing to continue posting an advisory sign at the beach where an advisory is in affect along with updating the recorded message you hear when you call 715-685-7870. Please let us know your thoughts on both the proposed monitoring design and notification methods.

U.S. EPA, March 2012 (Last Updated). 5.11 Fecal Bacteria. Washington, D.C. Accessed: March 1, 2013.
<http://water.epa.gov/type/rsll/monitoring/vms511.cfm>





Spring is Just Around the Corner!

John Patrick, Bad River NRD Tribal Game Warden



Spring is right around the corner.

Warmer weather brings all types of outdoor action. There will be more animals moving around, most of which will be looking for food.

Garbage we throw away is also appealing to some of these animals.

Nuisance animal complaints are most frequent during spring and fall seasons. Animals like bears, raccoons, skunks and others are on the lookout for any easy accessible food and are sometimes simply curious.

It is important that all garbage and recycling is put in a secure location which prevents animals from accessing. Used food containers can be rinsed out before being placed into the recycling bin. This reduces the amount of food odors traveling to the noses of those hungry animals nearby.

Four Steps Lead to Successful Nuisance Wildlife Control:

- Correctly **identify the species** causing the problem. (Once we know what kind of animal it is we can plan on appropriate ways to capture the animal for relocation.)
- Alter the habitat, if possible, to **make the area less attractive** to the wildlife pest. (This could mean keeping food waste unavailable for the animal to smell.)
- Use a **control method** appropriate to the location, time of year, and other environmental conditions. (The most commonly used methods for controlling nuisance wildlife

around homes and gardens include exclusion, habitat modification, repellents, traps and frightening methods, i.e. fences.)

•**Monitor the site for re-infestation** in order to determine if additional control is necessary. In any case, contact the Bad River Natural Resources Department and the Bad River Game Warden to assist in any nuisance wildlife issues.

Spring Thaw & Run-off:

During the spring thaw the river begins to swell and moves at a faster pace than normal. It is estimated that Bad River has a surface flow of approximately 2.93cfs (cubic feet per second) or roughly 2mph (miles per hour). Spring thaw and heavy rains can increase that speed significantly. With significant flow during spring runoff water current speeds can increase up to 20.6cfs or roughly 14mph or more. Add debris such as branches, logs, trees with a mix of clay and sand. Damages to your prop and water intake will more than likely occur. A damaged prop and clogged intake could leave your boat dead in the water with an overheated motor. Being at the mercy of the river paddling may not be enough to control the boat. It is **not recommended** that anyone attempt to swim or boat up or down the river during spring thaw. The increased flow could sweep anything downstream without control. **In case of any emergency please dial 911 for help. Please Drive Responsibly & Practice Boating Safety.**





Reducing Radon in Bad River

By Daniel Wiggins, Air Quality Technician

Radon is a carcinogen that has been linked to the development of lung cancer and is related to over 21,000 lung cancer deaths annually. It is a natural radioactive gas that is present everywhere and is commonly traced back to sources in the soils around your home, where it then has the ability to infiltrate your home through foundation cracks and openings. Once in your home radon can attach to particles in the air where they are then breathed in, and since radon is radioactive it can cause damage to lung tissue and contribute to the development of lung cancer.

Addressing radon is not difficult. Initially homes are tested with 7-day short-term test kit, which is used as a screening tool to determine if homes may have high indoor radon concentrations over the USEPA's action level of 4.0 picocuries per liter of air (pCi/L). If homes have tested high then additional testing is done using a long-term test kit, which will assist in showing levels that represent a result closer to the average annual level.

The Tribal Air Office offers free radon testing to the tribal community, along with further expertise to address homes that have tested high. Of the homes tested in Bad River, by the Air Office, four have had to be addressed with radon reduction methods, in the past three years.

So what does the system do and what is it comprised of? The system is mainly composed of a pipe, which is added to the existing foundation slab and extended above the roof's edge. Sealing is very important. Depending on what type of foundation the sealing and consideration of (radon) leakage points will vary. For example, if you have a crawlspace the entire crawlspace must have plastic sheeting and be sealed to the walls. The addition of a radon fan is the final major component in the system that draws the radon gas from beneath the foundation and releases it above the roof's edge. Each home will be unique, but the system is usually comprised of three major components: Vent pipe, radon fan, and proper sealing.

One tribal home was the highest recorded indoor radon level in the Bad River area, with levels over 30 pCi/L. Although very high levels, the radon reduction system installation was simple and used the existing sump pump pit to draw out the radon gas.

The BRHA has also just completed a radon reduction project with three housing units. The units were located in the Birch Hill Acres Community and were all found with elevated levels just over the USEPA's action level. Although the three units had a complex foundation, which included a crawlspace and mechanical room the installation of the system was not difficult (Figures are of the BRHA project).

Radon reduction is very important if your home has been found with high indoor levels. Radon reduction costs vary from home to home, however, testing is usually fairly inexpensive and can be easily done. Testing is the only way to know if your home has elevated radon levels.

If you have any question about free radon testing services for tribal members or anything about the Air Office services, please contact Daniel Wiggins at 715-682-7123, extension 1553 or email at Air1@badriver-nsn.gov.



Photo above is of one of the BRHA unit's crawlspaces being sealed. The vent pipe was added below this sealed membrane (plastic sheeting) and vented to the side of the house. Photo to the right is of the radon fan and vent pipe, which releases the radon gas away from the home.

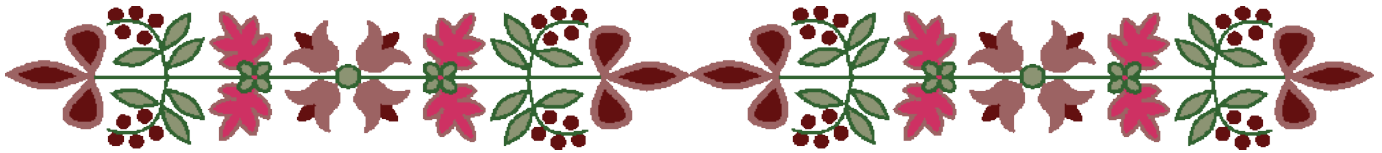


Bad River NRD New Employees



Eugene Bigboy, Tribal POWTS Inspector

Hello to everyone! I began work for the Bad River Tribe as the POWTS Inspector in the Department of Natural Resources. My job will be to coordinate, and organize the safe installation of your mound, and water and sewer systems for tribal homeowners. We work closely with IHS and various contractors and judging by the paperwork in the office this is a very busy office. I have been on the job for three weeks getting to know the system and working on backed-up chores. I will be busy with training and the upcoming construction season. This seems to be a very challenging job and I am looking forward to working with everyone. My office is located in the Chief Blackbird Center, Bad River NRD. Office hours Monday through Friday, from 8:00 AM to 4:30 PM. If you have any questions you can stop by or call at 715-682-7123, extension 1663.



William (Tony) Gilane, Indigenous Art & Science Coordinator

Boozhoo (Hello). My name is William (Tony) Gilane. I will be working from the Tribal Historic Preservation Office in the position of Indigenous Arts & Science Coordinator. This is my third time working for Bad River Natural Resources Department (BRNRD) and second time working for THPO Edith Leoso. With the exception of a few, most everyone here knows me at BRNRD. But just for those not familiar with who I am, I am a graduate from the University of Wisconsin- Superior with a B.S. in biology in 2010. I was employed as the NAGPRA Coordinator from 2011-13. Then I worked the position of BEACH Act Coordinator in 2013 for Naomi Tillison our Water Resources Specialist. I look forward to working cooperatively with our staff. I am grateful for my return to BRNRD and excited about the new challenge(s) that lie before me in my new position. Miigwech,

The Epiphany

By Ervin Soulier, NRD Director

I have told this story to others during the years so I thought I would share it with you. It is about an epiphany I had while going to a meeting. While driving to Lac Du Flambeau for a meeting one cold winter's day, I came upon a scene that made me realize what it takes to survive this world. As I was traveling down Highway 47 before reaching LDF, I entered into the tamarack swamp. As I turned the corner before entering the swamp, I noticed some movement on the next corner of the road. I couldn't tell what it was from a distance but as I got closer I could tell the movement was those of a bunch of crows along the side of the road. As I reach the spot where the crows were hopping around, I saw the crows were pecking at a frozen deer carcass which I figured was hit and killed by some vehicle. As I passed the frozen carcass I noticed a scruffy looking eagle standing on top of the deer also trying to get some food off from the carcass.

As I drove away I realize an important aspect in life that it doesn't matter how respected you are or how much honor is bestowed upon you, (like man) when it comes down to survival an eagle got to do what an eagle has to do even if it means you have to peck for food from a frozen deer carcass dead along a road surrounded by a bunch of crows.





BAD RIVER NATURAL RESOURCES

Bad River Natural Resource Department

Chief Blackbird Center

72682 Maple Street

Odanah, WI 54861

Phone: 715-682-7123

Fax: 715-682-7118



2015 Winter: Waverly Beach
Photo: By Daniel Wiggins

We're On The WEB!

www.badriver-nsn.gov

PUBLIC NOTICE

Bad River Band of Lake Superior Chippewa Comment Period and Public Hearings on Class I Air Redesignation



Background

On 7 May 2013 the Bad River Band of Lake Superior Chippewa notified the US Environmental Protection Agency of the Band commencing the redesignation process from Class II to Class I under the Clean Air Act's Prevention of Significant Deterioration program.

Public Hearings

The two public hearings are an opportunity to learn more about the Bad River Band's Class I redesignation, as well as time for any oral comments. Oral comments submitted at the public hearings will be given equal weight as written comments.

Written comments may be mailed or emailed at any point in the open comment period.

Documentation and More Information

Class I Analysis report can be found on the website:

<http://x.co/BADRVR>

Printed copies of the Analysis document have been placed in the following libraries:

Hurley, Mellen, Ashland, Washburn, La Pointe, and Bad River.

Timeline

16 January

- Class I Analysis report is published online for public review
- Public comment period begins

18 March

- Public Hearing 5:00 pm - 8:00 pm
Northern Great Lakes Visitor Center

19 March

- Public Hearing 5:00 pm - 8:00 pm
Bad River Housing Authority

1 May

- Public comment period closes at 4:30 pm

Submitting Comments

Written comments may be sent to:

Bad River Band of Lake Superior Chippewa
C/O Class I Air
72682 Maple Street
Odanah, WI 54861

Comments may also be emailed to:
class1air@badriver-nsn.gov

Comment deadline is 4:30 pm on 1 May 2015.

-MISSION STATEMENT-

The Department strives for resource management which both conserves the natural resources for the future generations and provide for the needs of the present. The departments existence reflects the importance the Bad River Tribe places on its right and ability to exercise sovereignty, self-determination and self-regulation in the area of natural resource management.